

1 In the Claims

2 Claims 1-16 are canceled without prejudice.

3 Claims 17-59 remain in the application and are listed below:

4

5 1.-16 (Canceled).

6

7 17. (Original) A computing device comprising:

8 a computer-readable medium;

9 a location service module embodied on the computer-readable medium; and
10 multiple different location providers configured to receive information from
11 one or more different sources of information and process the information to
12 provide location information to the location service module,

13 the location service module being configured to process the location
14 information to provide a current device location.

15

16 18. (Original) The computing device of claim 17 embodied as a mobile
17 computing device.

18

19 19. (Original) The computing device of claim 17 embodied as a desktop
20 computing device.

21

22 20. (Original) The computing device of claim 17, wherein one or more
23 of the location providers are configured to self-monitor their operation and to
24 inform the location service module of an operation irregularity.

1 21. (Original) The computing device of claim 17, wherein one or more
2 of the location providers are configured to assign confidence parameters to the
3 information that is provided to the location service module, the confidence
4 parameters providing a measure of a provider's confidence in the information.

5
6 22. (Original) The computing device of claim 17, wherein one or more
7 of the location providers are configured to assign accuracy parameters to the
8 information that is provided to the location service module, the accuracy
9 parameters providing a measure of the accuracy of a provider's information.

10
11 23. (Original) The computing device of claim 17, wherein one or more
12 of the location providers are configured to:

13 assign confidence parameters to the information that is provided to the
14 location service module, the confidence parameters providing a measure of a
15 provider's confidence in the information; and

16 assign accuracy parameters to the information that is provided to the
17 location service module, the accuracy parameters providing a measure of the
18 accuracy of a provider's information.

19
20 24. (Original) The computing device of claim 17, wherein one or more
21 of the location providers are configured to continuously update information that is
22 provided to the location service module.

1 25. (Original) The computing device of claim 17, wherein one or more
2 of the location providers are configured to periodically update information that is
3 provided to the location service module.

4
5 26. (Original) The computing device of claim 25, wherein the one or
6 more location providers are configured to update the information at specified
7 times.

8
9 27. (Original) The computing device of claim 25, wherein the one or
10 more location providers are configured to update the information on the
11 occurrence of specified events.

12
13 28. (Original) The computing device of claim 17, wherein one or more
14 of the location providers are configured to receive a request from the location
15 service module and update the information that is provided to the location service
16 module based on the request.

17
18 29. (Original) The computing device of claim 17, wherein the
19 computing device comprises a hand-held mobile computing device.

20
21 30. (Original) The computing device of claim 17, wherein the
22 computing device is configured to accommodate dynamically adding or removing
23 one or more location providers.

1 31. (Original) The computing device of claim 17, wherein the
2 computing device is configured to continue operation when one or more of the
3 location providers stops functioning.

4

5 32. (Original) The computing device of claim 17, further comprising a
6 hierarchical tree structure comprising multiple nodes that are each assigned a
7 unique identification, the nodes representing geographical divisions of the Earth,
8 the location service module being configured to traverse at least some of the nodes
9 to provide the current device location.

10

11 33. (Original) The computing device of claim 32, wherein one or more
12 of the location providers are configured to process the information and provide the
13 unique identification for one of the nodes of the hierarchical tree structure.

14

15 34. (Original) A method of determining the location of a computing
16 device comprising:

17 providing multiple location providers that are configured to provide
18 location information that pertains to a current location of the computing device;

19 receiving location information from the multiple location providers using a
20 common interface;

21 using the information that is received from the multiple location providers
22 to ascertain a current device location.

23

24 35. (Original) The method of claim 34, wherein the common interface
25 accommodates multiple location providers that are different.

1
2 36. (Original) The method of claim 34, wherein the receiving of the
3 location information comprises continuously receiving location information from
4 at least one of the location providers.

5
6 37. (Original) The method of claim 34, wherein the receiving of the
7 location information comprises periodically receiving location information from at
8 least one of the location providers.

9
10 38. (Original) The method of claim 37, wherein the receiving of the
11 information comprises receiving the information at specific times.

12
13 39. (Original) The method of claim 37, wherein the receiving of the
14 information comprises receiving the information on the occurrence of specific
15 events.

16
17 40. (Original) The method of claim 37, wherein the receiving of the
18 information comprises receiving the information responsive to a request to receive
19 the information.

20
21 41. (Original) One or more computer-readable media having computer-
22 readable instructions thereon which, when executed by a computing device, cause
23 the hand-held mobile computing device to:

24 provide multiple different location providers that are configured to provide
25 location information that pertains to a current location of the computing device;

1 receive location information from the multiple different location providers
2 using a common interface; and

3 use the information that is received from the multiple location providers to
4 ascertain a current device location.

5
6 42. (Original) The computer-readable media of claim 41, wherein the
7 instructions cause the computing device to traverse a hierarchical tree structure
8 comprising multiple nodes that represent physical or logical entities in order to
9 ascertain the current device location.

10
11 43. (Original) A method of determining the location of a mobile
12 computing device comprising:

13 providing multiple different location providers that are configured to
14 provide location information that pertains to a current location of the computing
15 device;

16 monitoring one or more of the location providers;

17 assigning a confidence parameter to location information that is provided
18 by one or more providers, the confidence parameter providing a measure of a
19 provider's confidence in its location information; and

20 sending the location information and the confidence parameter to a location
21 service module on the mobile computing device, the location service module being
22 configured to use the location information and the confidence parameter to
23 ascertain a current device location.

1 44. (Original) The method of claim 43 further comprising assigning an
2 accuracy parameter to the location information that is provided by one or more
3 providers, the accuracy parameter providing a measure of the accuracy of a
4 provider's location information.

5
6 45. (Original) The method of claim 43 further comprising responsive to
7 the monitoring, notifying the location service module upon the occurrence of an
8 operation irregularity.

9
10 46. (Original) The method of claim 43 further comprising receiving a
11 location query and responding to the query with a location provider.

12
13 47. (Original) The method of claim 43, wherein one or more of the
14 location providers are configured to continuously send the location information to
15 the location service module.

16
17 48. (Original) The method of claim 43, wherein one or more of the
18 location providers are configured to periodically send the location information to
19 the location service module.

20
21 49. (Original) The method of claim 48, wherein the one or more location
22 providers are configured to send the location information at specified times.

1 50. (Original) The method of claim 48, wherein the one or more location
2 providers are configured to send the location information on the occurrence of
3 specified events.

4
5 51. (Original) One or more computer-readable media having computer-
6 readable instructions thereon which, when executed by a mobile computing
7 device, implement the method of claim 43.

8
9 52. (Original) A method of determining the location of a mobile
10 computing device comprising:

11 providing multiple different location providers that are configured to
12 provide location information that pertains to a current location of the computing
13 device;

14 monitoring one or more of the location providers;

15 assigning an accuracy parameter to location information that is provided by
16 one or more providers, the accuracy parameter providing a measure of the
17 accuracy of a provider's location information; and

18 sending the location information and accuracy parameter to a location
19 service module on the mobile computing device, the location service module being
20 configured to use the location information and the accuracy parameter to ascertain
21 a current device location.

22
23 53. (Original) The method of claim 52 further comprising, responsive to
24 the monitoring, notifying the location service module on the occurrence of an
25 operation irregularity of a location provider.

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2 54. (Original) The method of claim 52 further comprising receiving a
3 location query and responding to the location query with the location provider.
4

5 55. (Original) The method of claim 52, wherein one or more of the
6 location providers continuously send location information to the location service
7 module.
8

9 56. (Original) The method of claim 52, wherein one or more of the
10 location providers periodically send location information to the location service
11 module.
12

13 57. (Original) The method of claim 56, wherein the one or more location
14 providers send the location information at specified times.
15

16 58. (Original) The method of claim 56, wherein the one or more location
17 providers send the location information on the occurrence of specified events.
18

19 59. (Original) One or more computer-readable media having computer-
20 readable instructions thereon which, when executed by a mobile computing
21 device, implement the method of claim 52.
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